

Math 211  
Quiz 03

W 10 Jul 2019

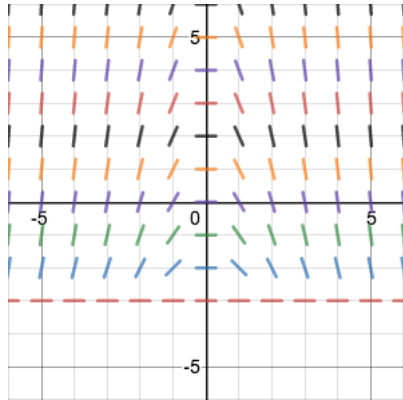
Your name: \_\_\_\_\_

## Exercise

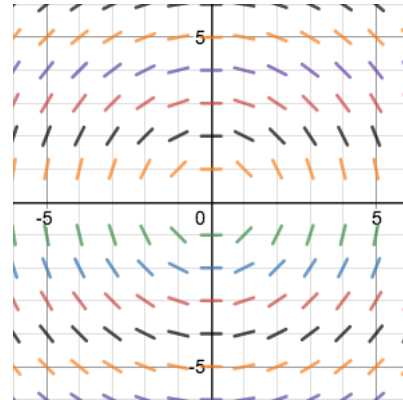
(2 pt) Matching : Write the number of the slope field next to its corresponding 1st-order ODE.

*Hint:* Is there anywhere the ODE is not defined? Where are the equilibrium solutions, if any?

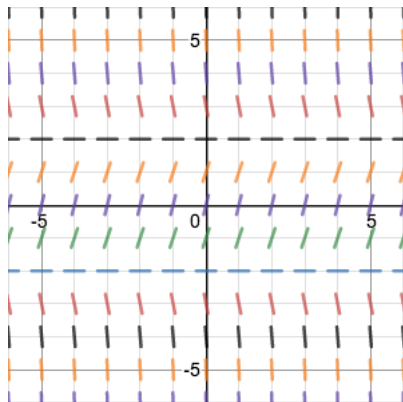
What happens to the algebraic value of  $\frac{dy}{dt} = f(t, y)$ , and to the slope at  $(t, y)$  in the slope field, as we change  $y$ ? as we change  $t$ ?



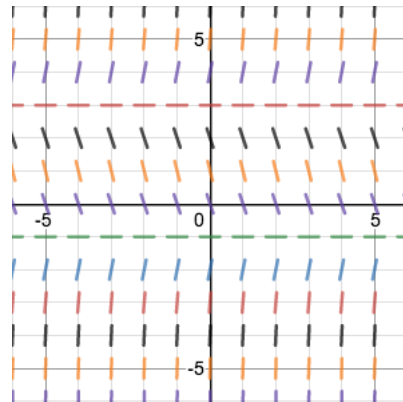
(1)



(2)



(3)



(4)

\_\_\_ (a)  $\frac{dy}{dt} = -\frac{t}{y}$

\_\_\_ (b)  $\frac{dy}{dt} = y^2 - 2y - 3$

\_\_\_ (c)  $\frac{dy}{dt} = -y^2 + 4$

\_\_\_ (d)  $\frac{dy}{dt} = -t\sqrt{y+3}$